

Fig. 1 (PRIOR ART) 16

|     | CA9  | CA8  | CA7  | CA6  | CA5  | CA4  | CA3  | CA2  | CA1  | CA0  |
|-----|------|------|------|------|------|------|------|------|------|------|
| PW1 | ID6  | ID5  | ID4  | ID3  | ID2  | ID1  | ID0  | CMD5 | CMD4 | CMD3 |
| PW2 | CMD2 | CMD1 | CMD0 | BNK2 | BNK1 | BNK0 | ROW9 | ROW8 | ROW7 | ROW6 |
| PW3 | ROW5 | ROW4 | ROW3 | ROW2 | ROW1 | ROW0 | 0    | 0    | 0    | 0    |
| PW4 | 0    | 0    | 0    | COL6 | COL5 | COL4 | COL3 | COL2 | COL1 | COL0 |

CA<0:39>

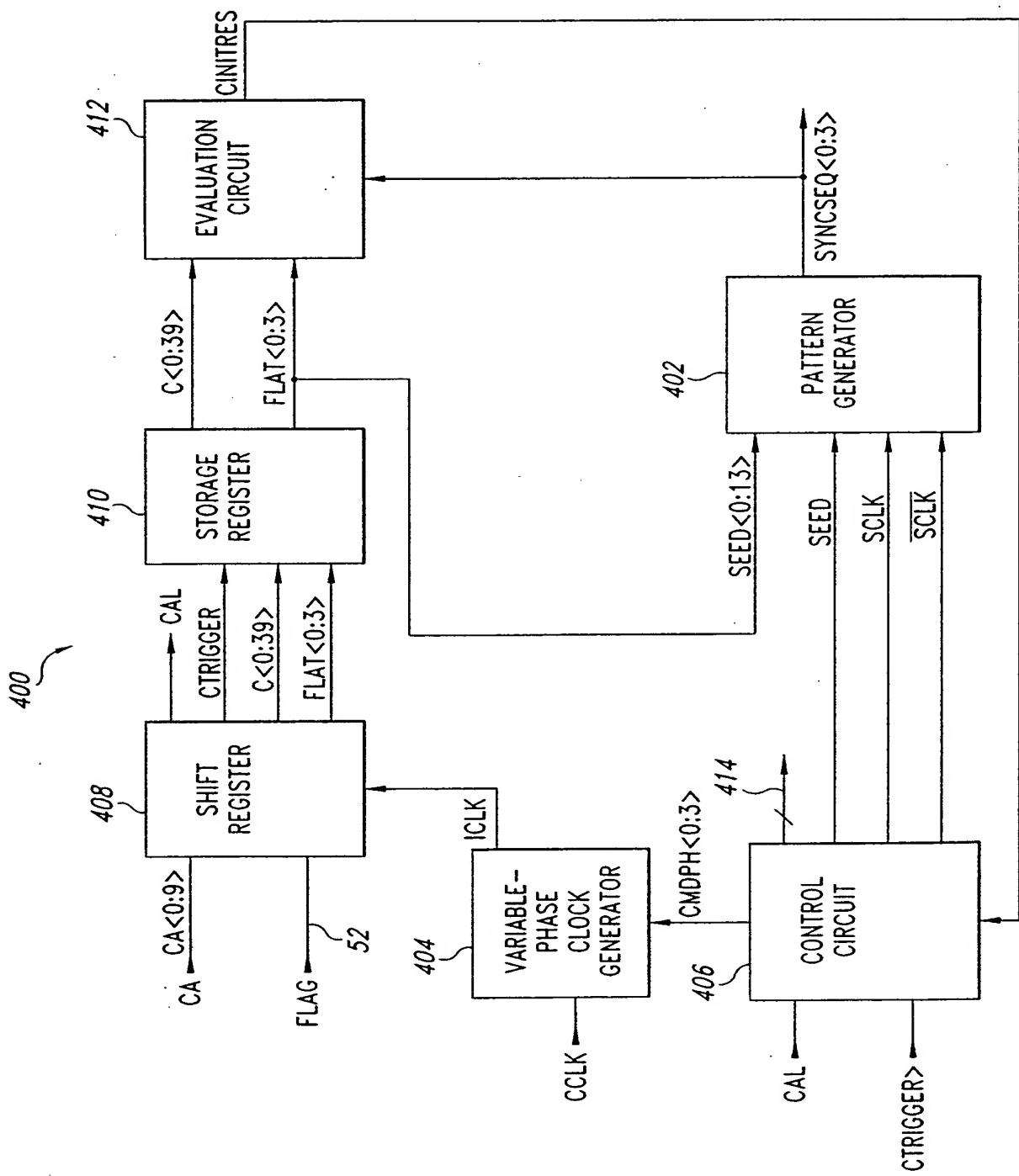
ID6-ID0 = DEVICE ID VALUE  
 CMD5-CMDO = COMMAND CODE  
 BNK2-BNK0 = BANK ADDRESS  
 ROW9-ROW0 = ROW ADDRESS  
 COL6-COL0 = COLUMN ADDRESS  
 0 = UNUSED

*Fig. 2*  
*(PRIOR ART)*

| Conventional EXPECT DATA |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                 |                 |      |
|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------|
| FLAG<br>(ideal)          | 1111           | 0101           | 1001           | 0001           | 1110           | 1011           | 0010           | 0011           | 1101            | 0110            | 0100            | 0111            | 1010            | 1100            | 1000 |
| FLAG<br>(shifted)        | 1101           | 0110           | 0100           | 0111           | 1010           | 1100           | 1000           | 1111           | 0101            | 1001            | 0001            | 1110            | 1011            | 0010            | 0011 |
| C <sub>1</sub>           | C <sub>2</sub> | C <sub>3</sub> | C <sub>4</sub> | C <sub>5</sub> | C <sub>6</sub> | C <sub>7</sub> | C <sub>8</sub> | C <sub>9</sub> | C <sub>10</sub> | C <sub>11</sub> | C <sub>12</sub> | C <sub>13</sub> | C <sub>14</sub> | C <sub>15</sub> |      |

Fig. 3  
(PRIOR ART)

Fig. 4



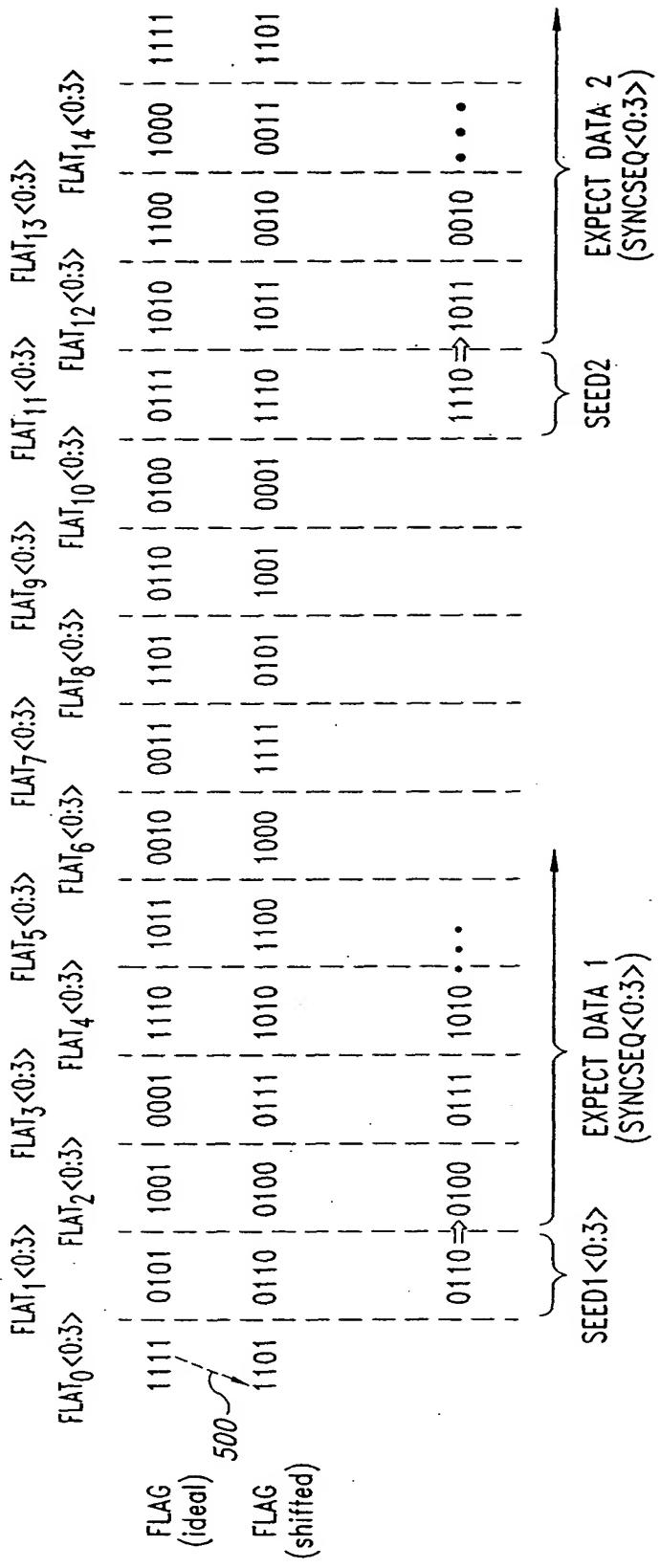
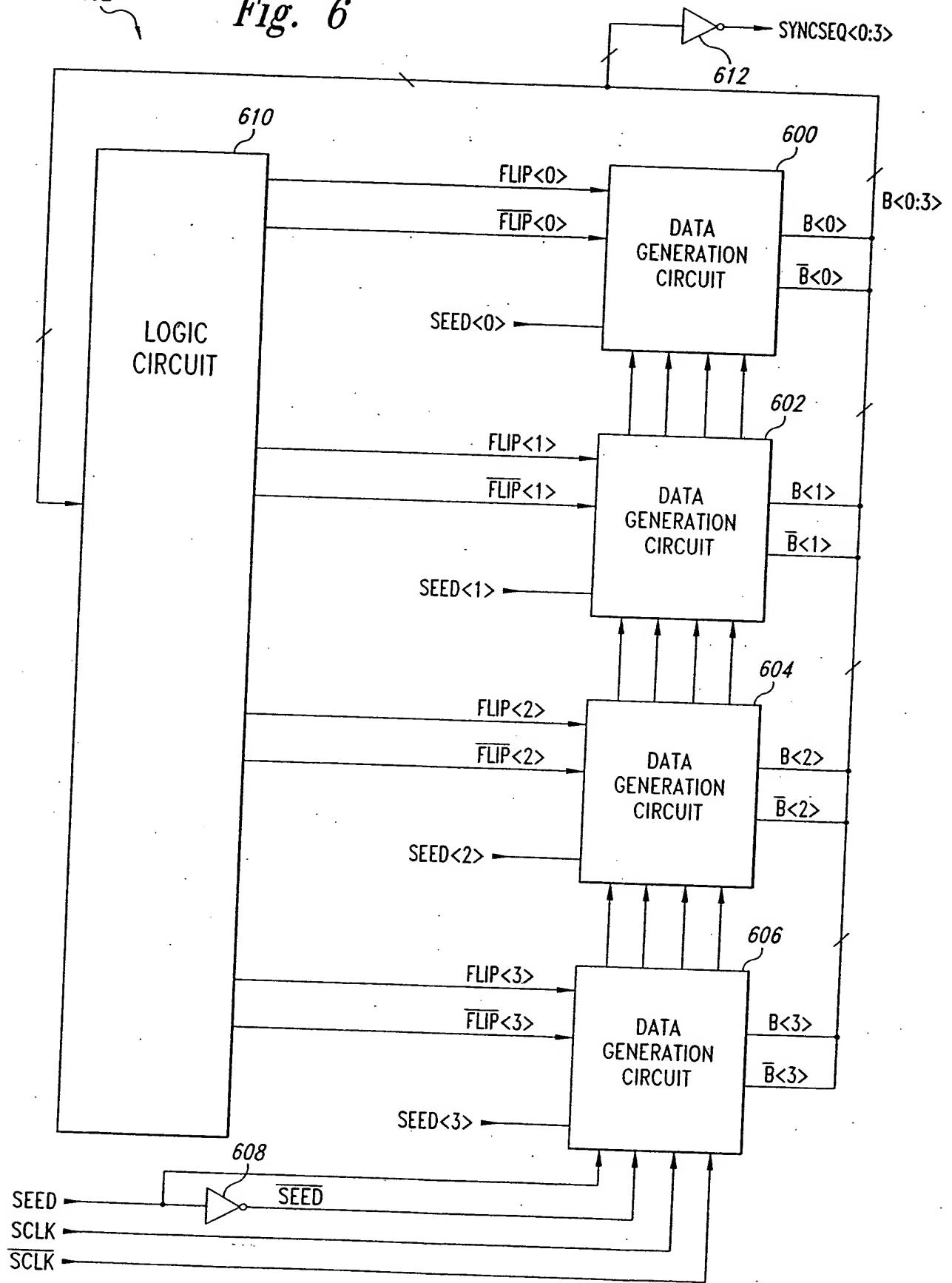


Fig. 5

402

Fig. 6



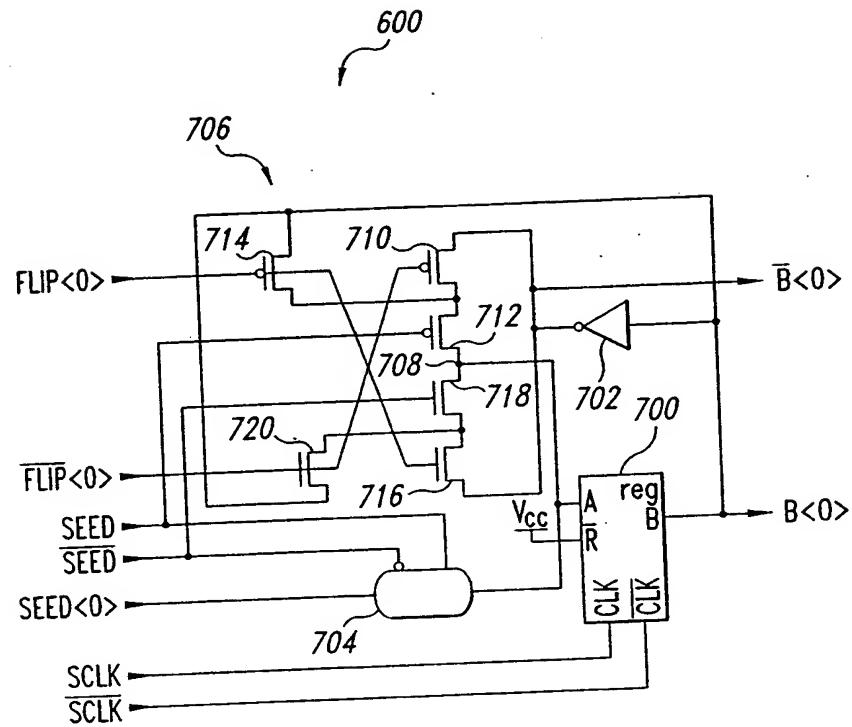


Fig. 7

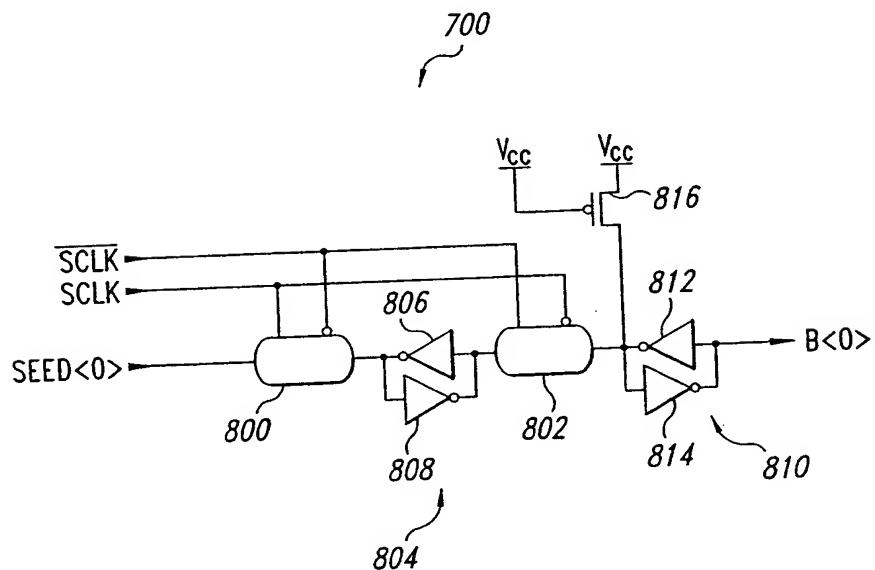
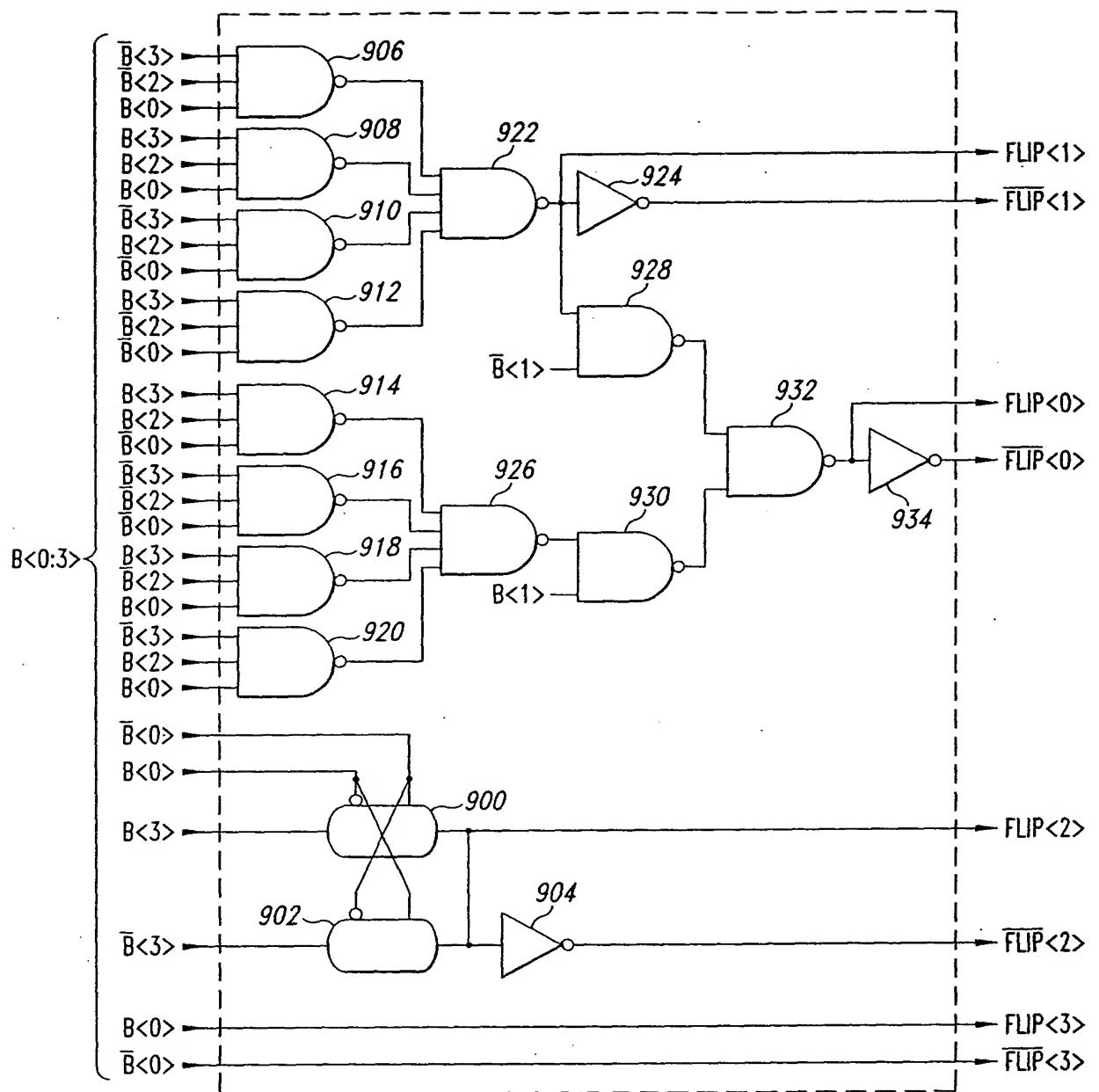
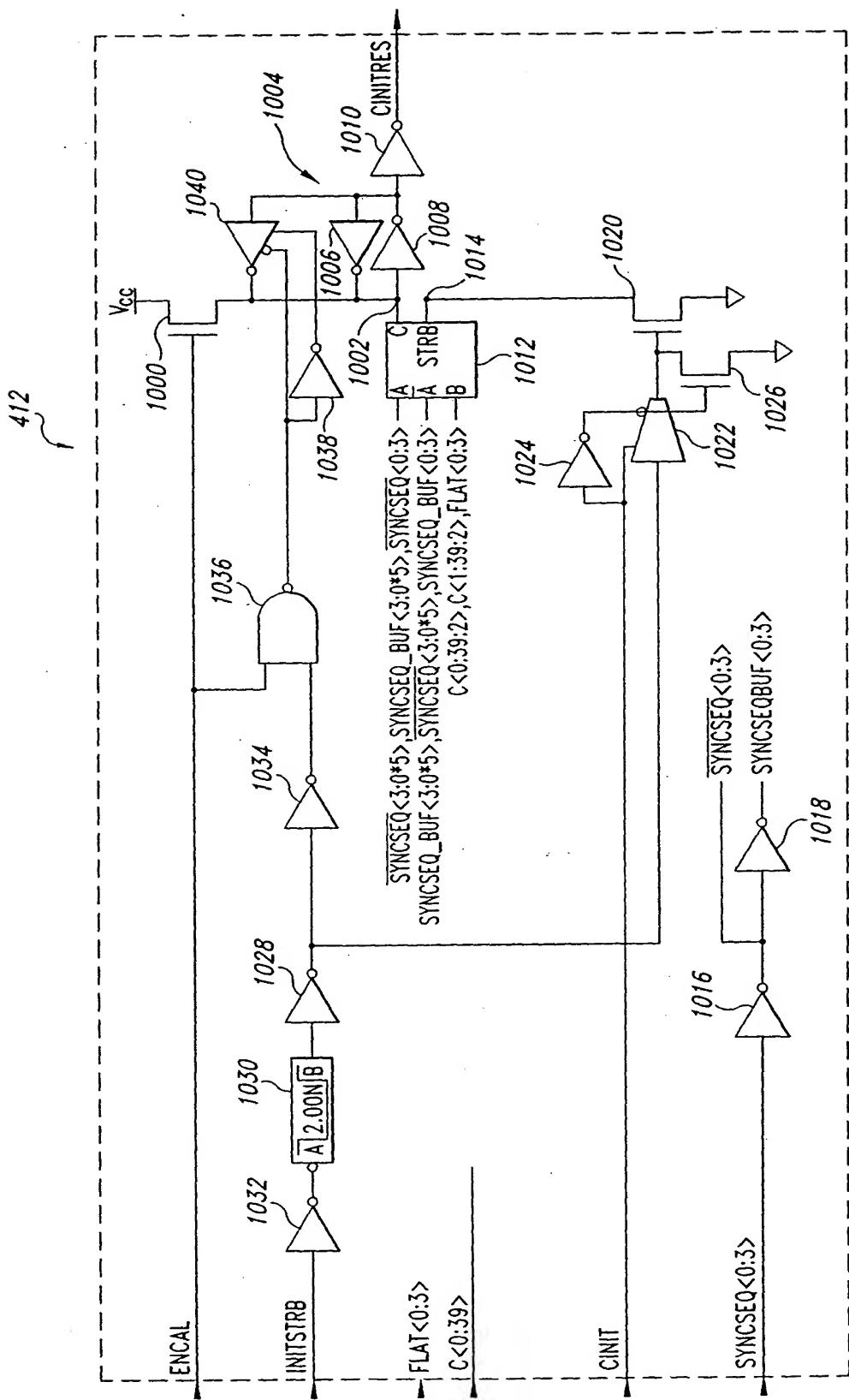


Fig. 8



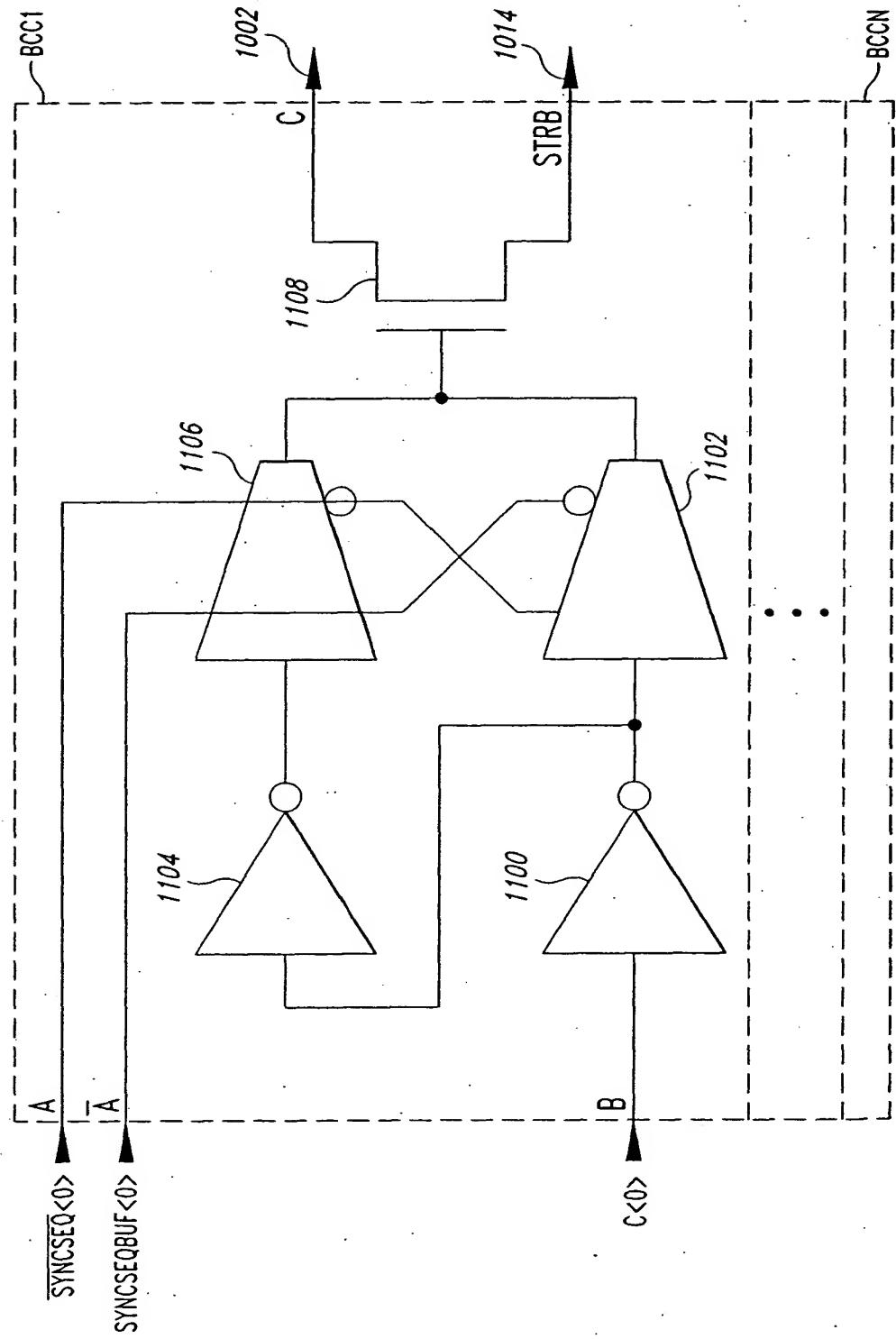
*Fig. 9*

Fig. 10



*Fig. 11*

1012



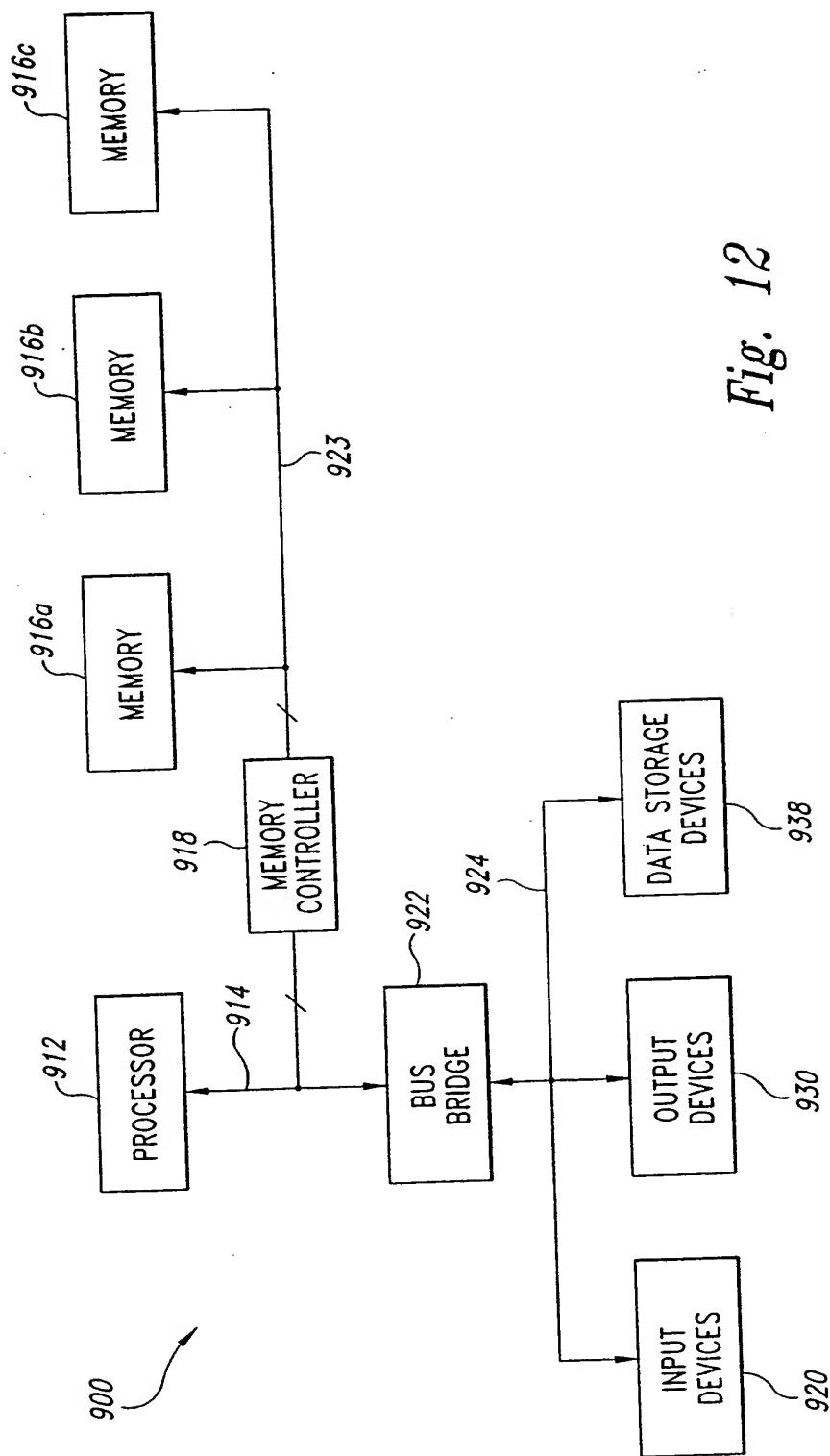


Fig. 12